

IN THE CLAIMS

Please amend the claims as follows:

1-5 (Canceled).

6 (Currently Amended): A data transmitting node connected with a physical network, comprising:

a first transmission unit for transmitting a control message in a case of transmitting information data to a receiving node connected with the physical network or another physical network, the control message including an IP (Internet Protocol) address information of a data transmission destination, a ~~header/channel~~ header or channel information dependent on the physical network, and an information indicating a required communication resource so as to notify a network connection device on a communication path that the information data that pass through the communication path established by the control message are requiring an indicated amount of communication resource; and

a second transmission unit for transmitting the information data containing the ~~header/channel~~ header or channel information for which the required communication resource is reserved, to the receiving node.

7 (Canceled).

8 (Original): The data transmitting node of claim 6, further comprising:
a reception unit for receiving digital video and/or digital audio data;

wherein the second transmission unit transmits the digital video and/or digital audio data received by the reception unit as the information data, by formatting the digital video and/or digital audio data into a transmission format for said physical network.

9-10 (Canceled).

11. (Currently Amended) A data transmitting node connected with a physical network, comprising:

a first transmission unit for transmitting a control message in a case of transmitting information data to a receiving node connected with the physical network or another physical network, the control message including an IP (Internet Protocol) address information of a data transmission destination, a ~~header/channel~~ header or channel information dependent on the physical network, and an information on a format of the information data to be transmitted according to the ~~header/channel~~ header or channel information so as to notify a network connection device on a communication path that the information data that pass through the communication path established by the control message will be in the indicated format; and

a second transmission unit for transmitting the information data in said format which contains the ~~header/channel~~ header or channel information. to the receiving node.

12 (Canceled).

13 (Original): The data transmitting node of claim 11, further comprising:

a reception unit for receiving digital video and/or digital audio data;

wherein the second transmission unit transmits the digital video and/or digital audio data received by the reception unit as the information data, by formatting the digital video and/or digital audio data into said format.

14-37 (Canceled).

38 (Currently Amended): A method of data transmission at a data transmitting node connected with a physical network. comprising the steps of:

(a) transmitting a control message in a case of transmitting information data to a receiving none connected with the physical network or another physical network, the control message including an IP (Internet Protocol) address information of a data transmission destination, a ~~header/channel~~ header or channel information dependent on the physical network, and an information indicating a required communication resource so as to notify a network connection device on a communication path that the information data that pass through the communication path established by the control message are requiring an indicated amount of communication resource; and

(b) transmitting the information data containing the ~~header/channel~~ header or channel information for which the required communication resource is reserved, to the receiving node.

39 (Canceled).

40 (Original): The method of claim 38, further comprising the step of:

(c) receiving digital video and/or digital audio data;

wherein the step (b) transmits the digital video and/or digital audio data received by the step (c) as the information data, by formatting the digital video and/or digital audio data into a transmission format for said physical network.

41-42 (Canceled).

43 (Currently Amended): A method of data transmission at a data transmitting node connected with a physical network, comprising the steps of:

(a) transmitting a control message in a case of transmitting information data to a receiving node connected with the physical network or another physical network, the control message including an IP (Internet Protocol) address information of a data transmission destination, a ~~header/channel~~ header or channel information dependent on the physical network, and an information on a format of the information data to be transmitted according to the ~~header/channel~~ header or channel information so as to notify a network connection device on a communication path that the information data that pass through the communication path established by the control message will be in the indicated format; and

(b) transmitting the information data in said format which contains the ~~header/channel~~ header or channel information, to the receiving node.

44 (Canceled).

45 (Original): The method of claim 43, further comprising the step of:

(c) receiving digital video and/or digital audio data;

wherein the step (b) transmits the digital video and/or digital audio data received by the step (c) as the information data, by formatting the digital video and/or digital audio data into said format.

46-84 (Canceled).